CREATIVE

Sound BLASTER ZxR

SB1510

User's Guide

Introduction

Congratulations on your purchase of Creative's latest audio revolution, Sound Blaster ZxR! The Sound Blaster ZxR is the flagship of the ultra high-performance Z-Series of Sound Blaster® PCI-Express sound cards. Designed to deliver the ultimate audio playback and creation solution for the PC, Sound Blaster ZxR personifies the ultimate gaming and entertainment performance for a sound card. It comes with DBpro Daughter Board, an external Audio Control Module, and a high quality Beamforming Microphone.

This User Guide contains software installation and usage information for your audio cards.

System Requirements

Minimum Requirements

- Intel® Core™2 Duo or AMD® processor equivalent (Core™2 2.0 GHz, AMD processor equivalent or faster recommended)
- Intel, AMD or 100% compatible motherboard
- Microsoft® Windows® 8 32-bit or 64-bit; Windows 7 32-bit or 64-bit
- 1 GB RAM
- >600 MB of free hard disk space
- Available PCI Express slot* and an empty I/O slot
- CD-ROM or DVD-ROM drive for software installation
- High quality headphones or powered amplified speakers (5.1 preferred)

Additional Requirements (where applicable)

DVD-Video

- 6x or faster DVD drive
- DVD player software such as InterVideo® WinDVD® or CyberLink® PowerDVD® (latest version recommended) installed.
- 5.1 speakers for optimal listening experience

Notes

- *Some motherboards reserve the PCI Express x16 slots for video cards only. Use a x1 or x4 slot instead. For more information, consult the documentation of your motherboard.
- Other applications may have higher system requirements. For more information, consult the documentation of your application.

More Help

For the latest news and products for Sound Blaster, visit www.soundblaster.com. The site also includes information on making purchases, technical help, and the latest driver updates.

Using Creative Software AutoUpdate

Locating, downloading, and installing updates for your Creative products is now simpler and faster with the web-based Creative Software AutoUpdate system.

When you connect to Creative Software AutoUpdate via the Internet, the web site will analyze your computer system to determine what operating system (OS), language, and Creative products are installed in your system.

After the online analysis, you will be able to select from a list of only the most relevant software and driver updates. The files will then be retrieved and installed on your system for you.

To learn more about Creative Software AutoUpdate, visit www.soundblaster.com/support.

Notes

- First-time users of Creative Software AutoUpdate may be prompted to authorize the download of a browser component required for system inspection. Ensure that the content is signed by Creative Labs, Inc., then click the **Yes** button.
- Ensure that all your Creative products are connected and installed on the same computer running Creative Software AutoUpdate.

About Your Hardware

For instructions on installing your Sound Blaster ZxR, consult the Quick Start leaflet.

To learn more about your product, consult the following sections:

- Your Sound Blaster ZxR Audio cards
- Audio Control Module

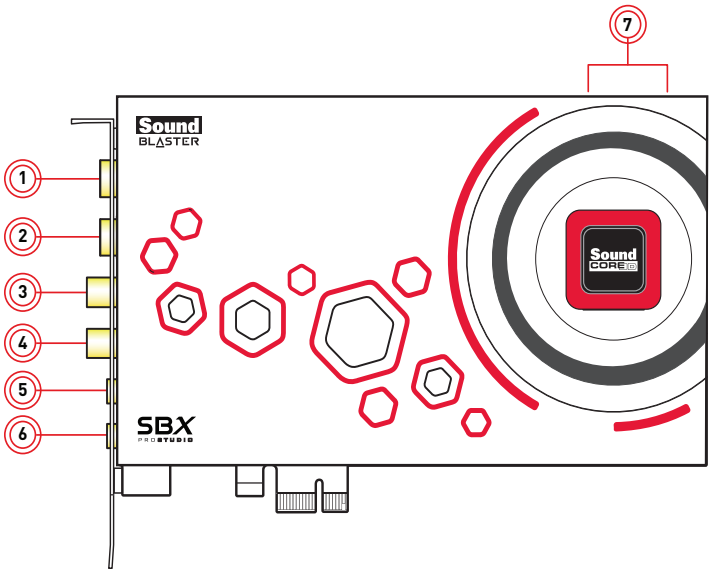
Notes

Actual products may differ slightly from those shown in this chapter.

Your Sound Blaster ZxR Audio cards

Your Sound Blaster ZxR audio cards have the jacks and connectors below to enable the attachment of a wide variety of devices.

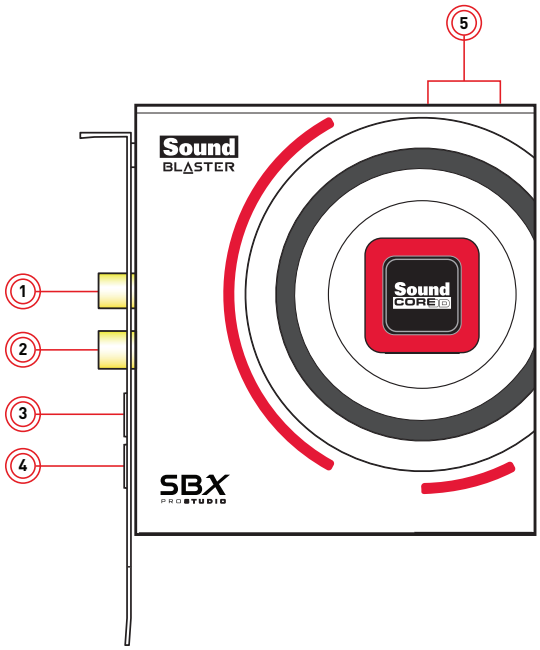
SB1510 Main Board



	Jack or Connector	Description
1.	6.3mm Microphone In jack	Connects to microphones with a 6.3mm (1/4-inch) plug.
2.	6.3mm Headphone jack	Connects to stereo headphones with a 6.3mm (1/4-inch) plug.
3.	RCA Line Out 1 jack (Front L)	Connects to the Front Left inputs on powered analog speakers or an A/V receiver.
4.	RCA Line Out 2 jack (Front R)	Connects to the Front Right inputs on powered analog speakers or an A/V receiver.
5.	3.5mm Line Out 1 jack (Rear L/R)	Connects to the Rear Left and Rear Right inputs on powered analog speakers or an A/V receiver.
6.	3.5mm Line Out 2 jack (Center/Subwoofer)	Connects to the Centre and Subwoofer inputs on powered analog speakers or an A/V receiver.
7.	DBpro daughter board connector	Connects to the DBpro daughter board.

DBpro Daughter Board

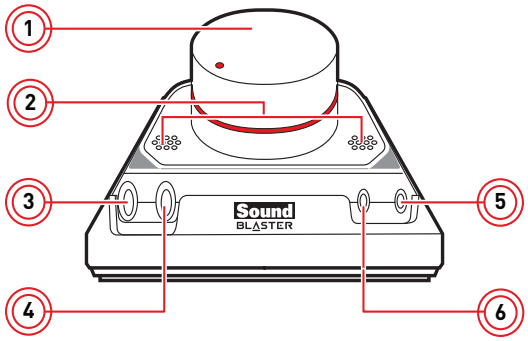
DBpro offers optical output for amazing audio playback; and professional grade 123dB analog-to-digital converters (ADCs) with RCA Aux-in and optical input for studio-grade recording quality.



	Jack or Connector	Description
1.	RCA Aux-In 1 jack (L)	Connects to the Left output line-level sources (for example, MP3 players) with an RCA plug.
2.	RCA Aux-In 2 jack (R)	Connects to the Right output line-level sources (for example, MP3 players) with an RCA plug.
3.	Optical S/PDIF Out jack	Connects to recording devices with optical connectors (for example, Digital Audio Tape recorders, MiniDisc recorders or external hard disk recorders).
4.	Optical S/PDIF In jack	Connects to playback devices with optical connectors (for example, Digital Audio Tape players, MiniDisc players or DVD players).
5.	Main board connector	Connects to the Main Board.

Audio Control Module

An external ACM (Audio Control Module) provides a built-in beamforming microphone and microphone/headphone I/O connections.



	Jack, Connector or Component	Description
1.	Volume Control Knob	Controls the playback volume of the sound cards.
2.	Beamforming Microphone	Built-in Sound Blaster Beamforming Microphone
3.	6.3mm Microphone In jack	Connects to microphones with a 6.3mm plug.
4.	6.3mm Headphone jack	Connects to stereo headphones or head-sets with a 6.3mm plug.
5.	3.5mm Microphone In jack	Connects to microphones with a 3.5mm (1/8-inch) plug.
6.	3.5mm Headphone jack	Connects to stereo headphones or head-sets with a 3.5mm (1/8-inch) plug.

Note:

The 6.3mm Microphone In jack takes priority over the 3.5mm Microphone In jack.

When connected to the Sound Blaster ZxR, the built-in beamforming microphone features CrystalVoice technologies which is designed to deliver crystal clear vocal fidelity in multiplayer games, online chats and video conferencing. It also enhances voice communications for popular VoIP solutions. Voice effects can be controlled using bundled software, ie. Sound Blaster Z-Series Control Panel.

The options of 3.5mm and 6.3mm Microphone and Headphone jacks let you have choices of your own on which headset or microphone to be used for recording, and audiophile grade connection through the gold-plated jacks on the ACM and Sound Blaster ZxR.

The Volume Control knob on the ACM controls the volume output to your headphones, giving you quick control over the audio level from your games or music.

Note:

The ACM Volume Control Knob allows you to adjust headphone levels conveniently based on the maximum level set by your computer's master volume control. We recommend that you determine the desired maximum volume on your computer before using the ACM.

Connecting Speakers and Headphones

The connectors and associated components shown here may be different from that of your speaker system. Consult the documentation of your speaker system to identify similar input connectors. You can upmix your stereo sources (for example, CD Audio, MP3, WMA, MIDI and Wave) to enjoy multi-channel sound on your speakers or headphones.

To learn how to connect different types of speaker systems to your audio cards, consult the following sections:

- Connecting Analog Speaker Systems
- Connecting Digital Speaker Systems
- Connecting Home Theater Systems
- Connecting Headphones and Headsets
- Connecting Audio Control Module

For tips on how to arrange your speakers, consult Positioning Your Speakers.

For a list of supported Creative speaker systems or interactive help on speaker connectivity, visit www.soundblaster.com.

Note

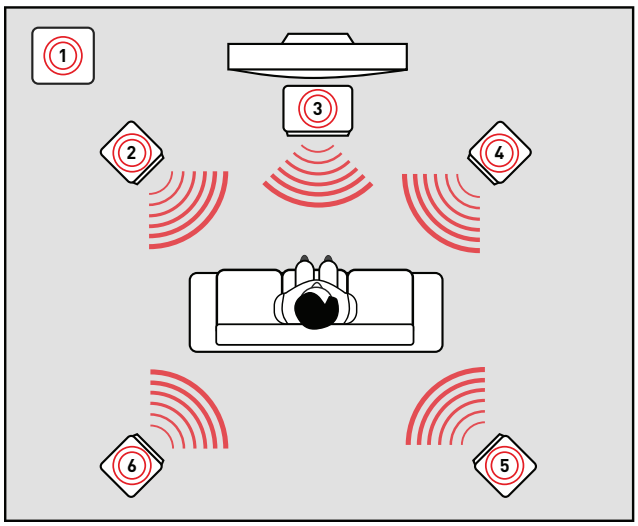
- Actual products may differ slightly from those shown in this chapter.
- Select the correct speaker setup or headphone option in the Sound Blaster Z-Series Control Panel to get the best experience. For more information, refer to their respective Online Help.
- The cables shown in this chapter may be bundled with your peripheral or are available separately from www.creative.com.
- For more information on the Creative peripherals mentioned in this chapter, visit www.creative.com.

Positioning Your Speakers

Good speaker placement is crucial to getting optimal performance from your audio system and achieving an enhanced listening experience. Below are our recommendation for 5.1 channel speakers.

For detailed speaker placement tips, consult the documentation of your speaker system.

For 5.1 channel speakers:



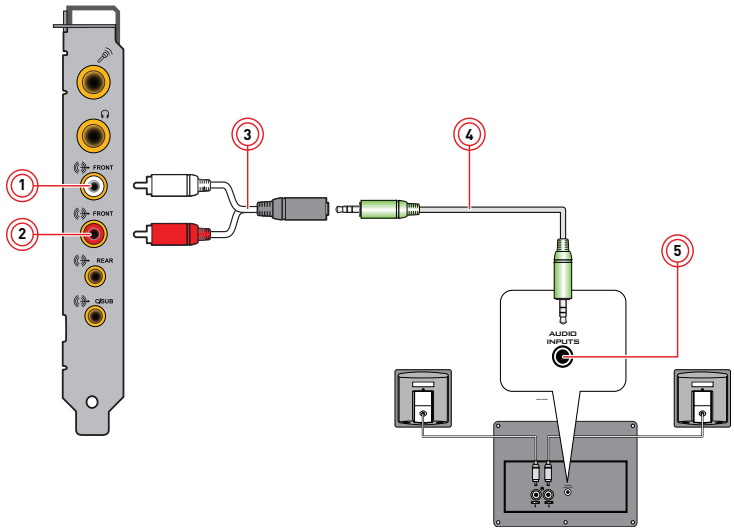
	Speaker Component
1.	Subwoofer
2.	Front left
3.	Front Center
4.	Front Right
5.	Rear Right
6.	Rear Left

Connecting Analog Speaker Systems

Your audio cards support analog speaker systems of up to 5.1 channels. To learn more about connecting different channel speaker systems, consult the following sections:

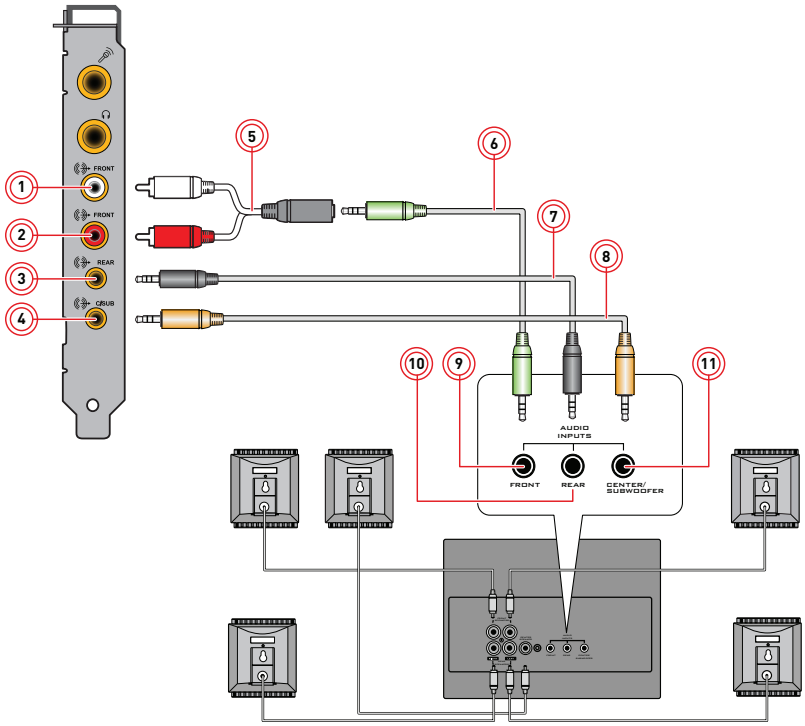
- 2.1 channel analog speakers
- 5.1 channel analog speakers

2.1 channel analog speakers



	Jack, Connector or Cable
1.	RCA Line Out 1 jack (Front L)
2.	RCA Line Out 2 jack (Front R)
3.	Y-Splitter cable (available separately)
4.	2 channel audio cable (available separately)
5.	Audio Input jack

5.1 channel analog speakers



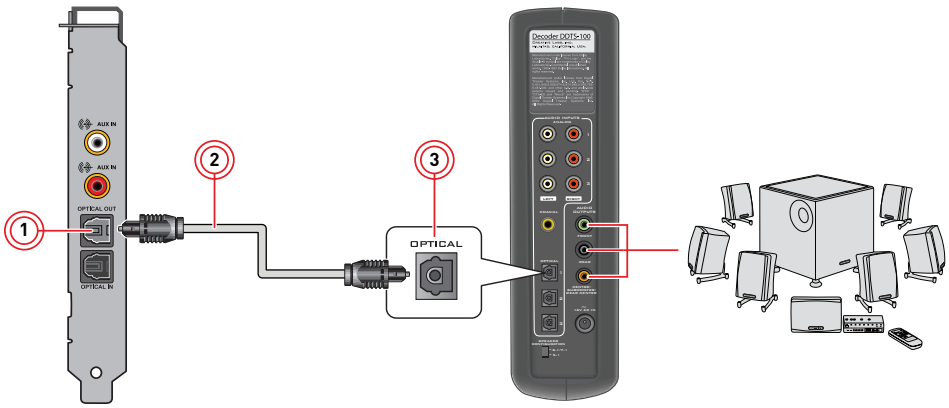
	Jack, Connector or Cable
1.	RCA Line Out 1 jack (Front L)
2.	RCA Line Out 2 jack (Front R)
3.	3.5mm Line Out 1 jack (Rear L/R)
4.	3.5mm Line Out 2 jack (Center/Subwoofer)
5.	Y-Splitter cable (available separately)
6.	2 channel audio cable (available separately)
7.	2 channel audio cable (available separately)
8.	2 channel audio cable (available separately)
9.	Front (Audio Input) jack
10.	Rear (Audio Input) jack
11.	Center/Subwoofer (Audio Input) jack

Connecting Digital Speaker Systems

Your Sound Blaster ZxR comes with an Optical S/PDIF Out jack which allows you to connect your digital speaker system. Most digital speakers systems connect the audio cards to the subwoofer or an external unit.

For more information on your digital speaker connections, consult the documentation of your digital speaker system.

Connecting your digital speakers to the Sound Blaster ZxR



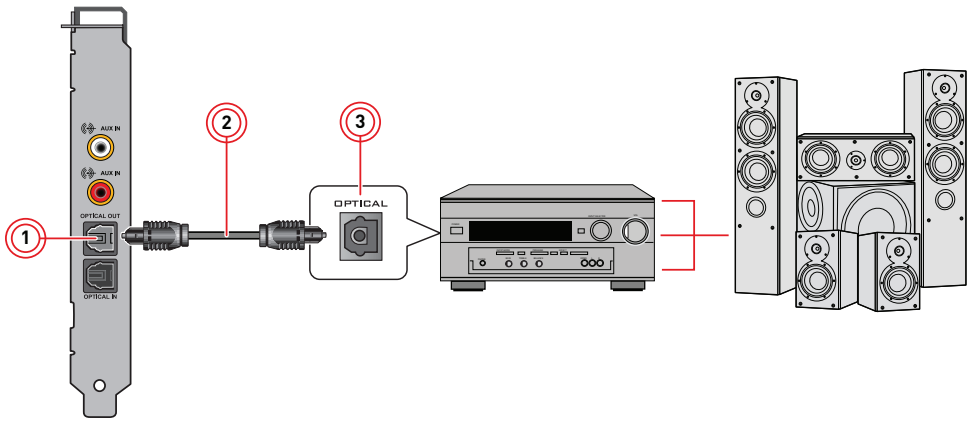
	Jack, Connector or Cable
1.	Optical S/PDIF Out jack
2.	Optical cable
3.	Optical S/PDIF In jack

Connecting Home Theater Systems

Your Sound Blaster ZxR comes with an Optical S/PDIF jack which allows you to connect your home theatre system. Most home theater systems connect the audio cards to an A/V receiver.

For more information on your A/V receiver's speaker connections, consult the documentation of your A/V receiver.

Connecting your A/V receiver to the Sound Blaster ZxR

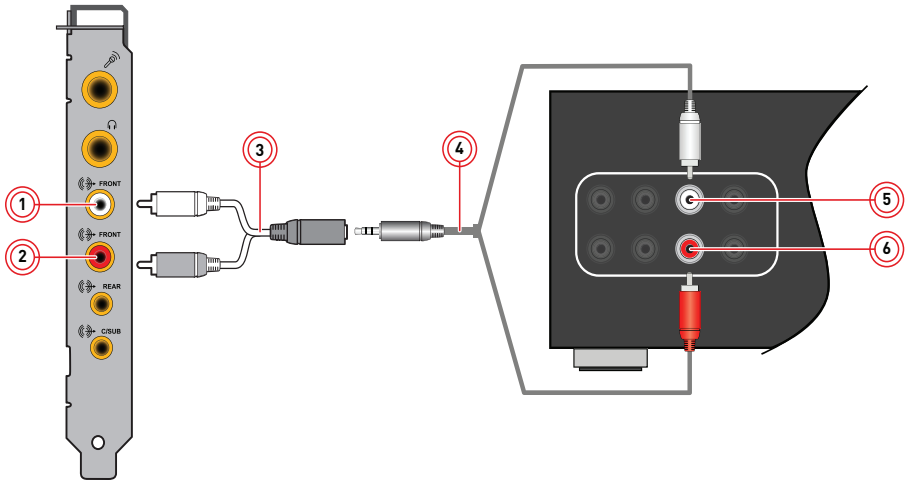


	Jack, Connector or Cable
1.	Optical S/PDIF Out jack
2.	Optical cable
3.	Optical S/PDIF In jack

Connecting your A/V Receiver using Line Level inputs

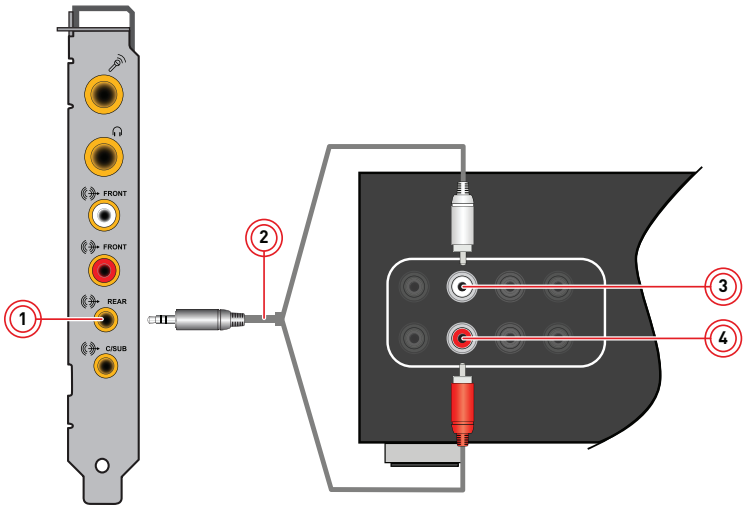
If your A/V receiver supports multi-channel line-level inputs, you can connect them directly to your audio cards' Line Out jacks instead of the Optical S/PDIF Out jack as shown below.

Connect to RCA Line Out 1 and Line Out 2 (Front L/R)



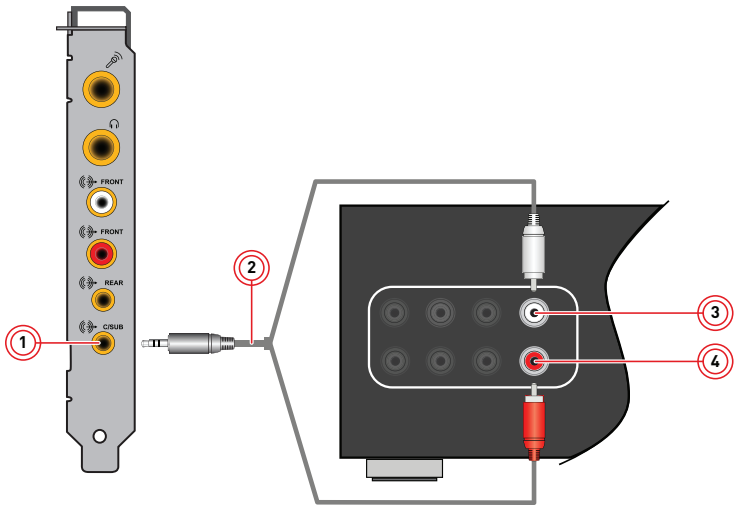
	Jack, Connector or Cable	Description
1.	RCA Line Out 1 jack (Front L)	Connects to the Front Left jack on your A/V receiver, using a 3.5mm (1/8-inch) stereo-to-RCA cable.
2.	RCA Line Out 2 jack (Front R)	Connects to the Front Right jack on your A/V receiver, using a 3.5mm (1/8-inch) stereo-to-RCA cable.
3.	Y-Splitter cable (available separately)	Converts the RCA cables to a stereo cable.
4.	3.5mm (1/8-inch) Stereo-to-RCA cable (available separately)	Connects your audio card and A/V receiver.
5.	Front Right jack	Connects to the Line Out 1 jack on your audio cards, using a 3.5mm (1/8-inch) stereo-to-RCA cable.
6.	Front Left jack	Connects to the Line Out 1 jack on your audio cards, using a 3.5mm (1/8-inch) stereo-to-RCA cable.

Connect to 3.5mm Line Out 1 (Rear L/R)



	Jack, Connector or Cable	Description
1.	3.5mm Line Out 1 jack (Rear L/R)	Connects to the Rear Left and Rear Right jacks on your A/V receiver, using a 3.5mm (1/8-inch) stereo-to-RCA cable.
2.	3.5mm (1/8-inch) Stereo-to-RCA cable	Connects your audio cards and A/V receiver.
3.	Rear Right jack	Connects to the Line Out 2 jack on your audio cards, using a 3.5mm (1/8-inch) stereo-to-RCA cable.
4.	Rear Left jack	Connects to the Line Out 2 jack on your audio cards, using a 3.5mm (1/8-inch) stereo-to-RCA cable.

Connect to 3.5mm Line Out 2 (Center/Subwoofer)



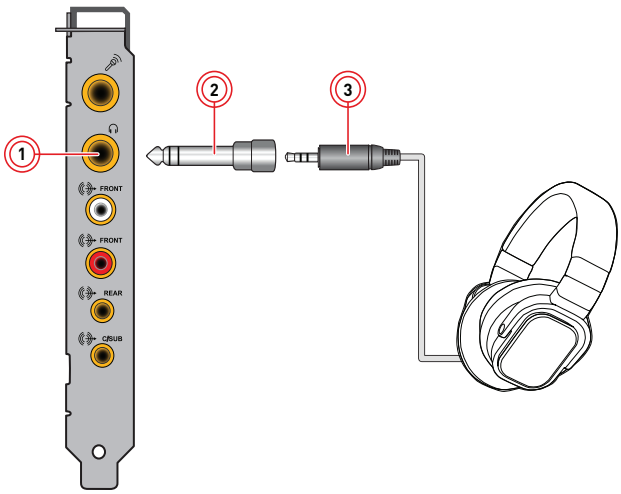
	Jack, Connector or Cable	Description
1.	3.5mm Line Out 2 jack (Center/Sub-woofer)	Connects to the Center and Subwoofer jacks on your A/V receiver, using a 3.5mm (1/8-inch) stereo-to-RCA cable.
2.	3.5mm (1/8-inch) Stereo-to-RCA cable	Connects your audio cards and A/V receiver.
3.	Subwoofer jack	Connects to the Line Out 3 jack on your audio cards, using a 3.5mm (1/8-inch) stereo-to-RCA cable.
4.	Center jack	Connects to the Line Out 3 jack on your audio cards, using a 3.5mm (1/8-inch) stereo-to-RCA cable.

Connecting Headphones and Headsets

Do not listen to audio on your headphones or headsets at high volumes for prolonged periods of time as hearing loss may result.

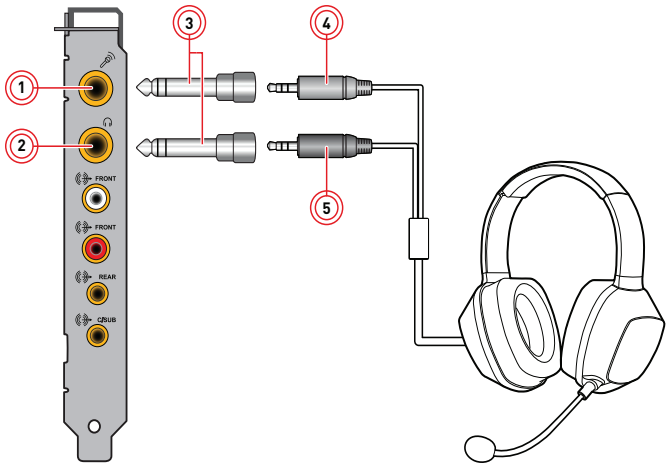
Connecting your headphones and headsets to the Sound Blaster ZxR

For headphones:



	Jack, Connector or Cable	Description
1.	6.3mm Headphone jack	Connects to stereo headphones with a 3.5mm (1/8-inch) plug via an adapter.
2.	6.3mm to 3.5mm Adapter	Converts 6.3mm (1/4-inch) stereo jack to 3.5mm (1/8-inch) stereo jack.
3.	3.5mm Headphone Plug	Connects to the 6.3mm Headphone jack on your audio card via an adapter.

For headsets:

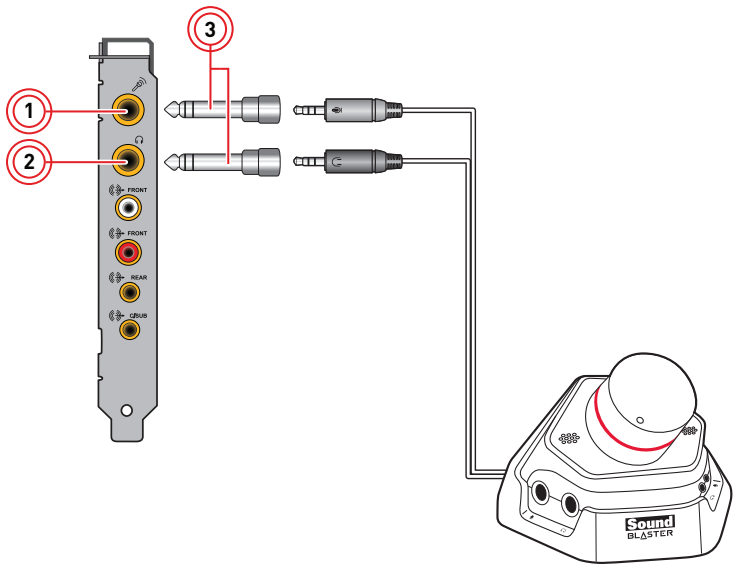


	Jack, Connector or Cable	Description
1.	6.3mm Microphone In jack	Connects to the 3.5mm (1/8-inch) micro-phone plug of your headset via an adapter.
2.	6.3mm Headphone jack	Connects to stereo headphones with a 3.5mm (1/8-inch) plug via an adapter.
3.	6.3mm to 3.5mm Adapter	Converts 6.3mm (1/4-inch) stereo jack to 3.5mm (1/8-inch) stereo jack.
4.	3.5mm Microphone In Plug	Connects to the 6.3mm Microphone In jack on your audio card via an adapter.
5.	3.5mm Headphone Plug	Connects to the 6.3mm Headphone jack on your audio card via an adapter.

Connecting Audio Control Module

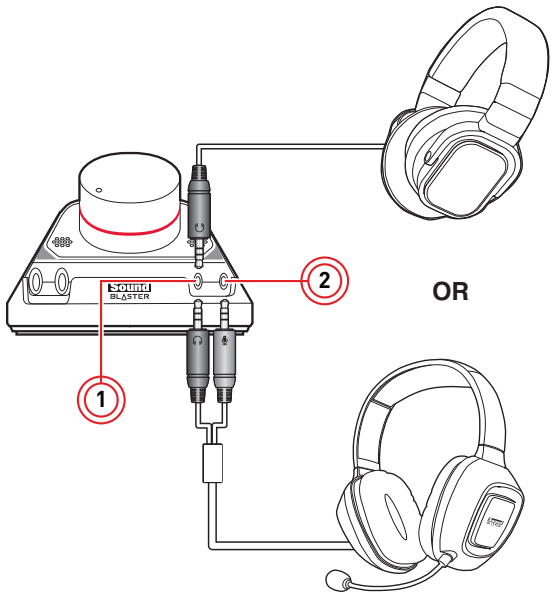
The Sound Blaster ZxR comes with an external ACM that incorporates a 600 ohm headphone amplifier, built-in microphone array and mic/headphone I/O connections and a volume control knob.

Connecting your ACM to the Sound Blaster ZxR



	Jack, Connector or Cable	Description
1.	6.3mm Microphone In jack	Connects to the 3.5mm (1/8-inch) microphone plug of your ACM.
2.	6.3mm Headphone jack	Connects to your ACM with a 3.5mm (1/8-inch) plug.
3.	6.3mm to 3.5mm Adapter	Converts 6.3mm (1/4-inch) stereo jack to 3.5mm (1/8-inch) stereo jack.

Connecting your headphones and headsets to the ACM



	Jack, Connector or Cable	Description
1.	3.5mm Headphone jack	Connects to stereo headphones or headsets with a 3.5mm (1/8-inch) plug.
2.	3.5mm Microphone In jack	Connects to microphones with a 3.5mm (1/8-inch) plug.

Note:

When two headphones are being connected to the 6.3mm and 3.5mm Headphone jacks simultaneously, you will be able to hear both headphones with the same output.

However, the Microphone In jacks on the ACM follow the priority sequence listed below:

- Priority 1: 6.3mm Microphone In jack
- Priority 2: 3.5mm Microphone In jack
- Priority 3: Built-in Beamforming Microphone

For example, when user plugs in external microphones to both 6.3mm and 3.5mm Microphone In jacks, the 6.3mm Microphone In jack will take priority over the 3.5mm Microphone In jack and the built-in Beamforming Microphone. However, when no microphone is connected to all Microphone In jacks, the built-in Beamforming Microphone will function.

Installing and Uninstalling Software

To take full advantage of your Sound Blaster ZxR audio cards, you need to install device drivers and applications. At times, you may also need to uninstall some or all of the device drivers and applications to correct problems, change configurations, or upgrade outdated drivers or applications. To learn how to do so in all supported Windows operating systems, consult the following sections:

- Uninstalling Drivers and Applications
- Installing Drivers and Applications

Uninstalling Drivers and Applications

Before you begin, close all running audio applications. Applications that are still running during uninstallation will not be removed.

For Windows 7:

1. Click **Start > Control Panel > Uninstall a Program**.
2. Select the **Sound Blaster Z-Series** entry.
3. Click the **Uninstall** button or option.
   If the **User Account Control** dialog box appears, click the **Continue** button.
4. Click the **Yes** button.
5. When prompted, restart your computer.

For Windows 8:

1. At the right toolbar, click **Settings > Control Panel > Uninstall a Program**.
2. Select the **Sound Blaster Z-Series** entry.
3. Click the **Uninstall** button or option.
4. Click the **Yes** button.
5. When prompted, restart your computer.

To complete the uninstallation, you will also need to remove the following components:

- Dolby Digital Live Pack
- DTS Connect Pack

To remove Dolby Digital Live:

Note

Carry out the following steps ONLY IF there are no other Creative applications on your system that requires the Dolby Digital Live encoder.

For Windows 7:

1. Click **Start > Control Panel > Uninstall a Program**.
2. Select the **Dolby Digital Live Pack** entry.
3. Click the **Uninstall** button or option.
   When the **Confirm Uninstall** dialog box appears, click the **OK** button.

For Windows 8:

1. At the right toolbar, click **Settings > Control Panel > Uninstall a Program**.
2. Select the **Dolby Digital Live Pack** entry.
3. Click the **Uninstall** button or option.

To remove DTS Connect:

Note

Carry out the following steps ONLY IF there are no other Creative applications on your system that requires the DTS Connect encoder.

For Windows 7:

1. Return to the **Start > Control Panel > Uninstall a Program** window.
2. Select the **DTS Connect Pack** entry.
3. Click the **Uninstall** button or option.
   When the **Confirm Uninstall** dialog box appears, click the **OK** button.

For Windows 8:

1. At the right toolbar, click **Settings > Control Panel > Uninstall a Program**.
2. Select the **DTS Connect Pack** entry.
3. Click the **Uninstall** button or option.

After you have completed the steps above, you can install the original or updated device drivers and applications for Sound Blaster Z-Series. For instructions on installing the software, consult **Installing Drivers and Applications**.

Installing Drivers and Applications

Ensure that your audio cards are installed before proceeding. For instructions on installing your audio cards, consult your Quick Start leaflet.

After you have installed your audio cards, turn on your computer. Windows automatically detects your audio cards and searches for device drivers.

For Windows 7:

1. Insert the Installation CD into your CD or DVD drive.
   Your CD should start automatically. If it does not, follow the steps below:
   i. Click **Start > Computer**.
   ii. Right-click the CD or DVD drive icon, and then click **Open AutoPlay**.
2. To complete the installation, follow the instructions on the screen.
   If you encounter the following message, click **Install**.

Windows Security
Would you like to install this device software?
Name: CREATIVE Sound, video and game controlle...
Publisher: Creative Technology
Always trust software from "Creative Technology".
Install
Don't Install
You should only install driver software from publishers you trust. How can I decide which device software is safe to install?

3. When prompted, restart your computer.

For Windows 8:

1. Insert the Installation CD into your CD or DVD drive.
2. In a short while, a drive icon will be displayed. Click on the icon, and then choose **Run setup.exe**.
   If you do not see the drive icon, follow the steps below:
   i. Right-click on the background of the Windows start screen, and then click **All apps**.
   ii. Click **Computer**.
   iii. Right-click the CD or DVD drive icon, and then click **Open AutoPlay**.
3. To complete the installation, follow the instructions on the screen.
   If you encounter the following message, click **Install**.

Windows Security
Would you like to install this device software?
Name: CREATIVE Sound, video and game controlle...
Publisher: Creative Technology
Always trust software from "Creative Technology".
Install
Don't Install
You should only install driver software from publishers you trust. How can I decide which device software is safe to install?

4. When prompted, restart your computer.

Using Your Sound Blaster ZxR

Sound Blaster ZxR delivers the ultimate audio playback solution for the PC. Studio-grade components, which include external digital-to-analog converters (DACs) that deliver 127dB signal-to-noise ratio (SNR), sockets for swappable OP-Amps, a high-end 80mW into 600 ohm headphone amplifier and 197kHz pass through, deliver phenomenal audio quality.

Your Sound Blaster ZxR works seamlessly with many external devices to perform different tasks. To learn more about these tasks and how to connect additional devices, consult the following sections:

- Playing Games
- Watching DVDs
- Playing / Recording Music
- Creating Music
- Online Chatting

Note

- Actual products may differ slightly from those shown in this chapter.
- The cables shown in this chapter may be bundled with your peripheral or are available separately from www.creative.com.
- For more information on the Creative peripherals mentioned in this chapter, visit www.creative.com.

Playing Games

Your Sound Blaster ZxR is specially designed to enhance audio in games using Creative's cutting edge audio technologies. Playing games will be more exhilarating than ever before!

To learn more about the following audio technologies, visit www.soundblaster.com.

CrystalVoice

In gaming today, if you're not communicating, you're not winning. Experience the crystal-clear communication with your teammates with the CrystalVoice suite of technologies that removes echoes, ambient noises, and picks up your voice even accurately even when you move around the room.

EAX ADVANCED HD

Make your games come alive with EAX® ADVANCED HD™ and immerse yourself in worlds that their creators envisioned!

Hear multiple audio effects being played simultaneously, and precise environment settings applied to them to create a life-like environment and heighten the sense of realism.

Each effect is also accurately positioned in its 3D environment, allowing you to tell where it is coming from relative to your location, and you will be able to discern where your teammates and enemies are using only these audio cues.

EAX ADVANCED HD is a weapon that will give you the competitive edge, especially in multiplayer games.

Creative ALchemy

Creative ALchemy is a powerful tool that restores the audio for a DirectSound®3D game running on Windows 7 or Windows 8 to its former glory - in full surround sound with hardware accelerated audio mixing, sampling rate conversion and EAX effects.

Dolby Digital Live

Dolby Digital Live is a real-time encoding technology from Dolby Laboratories that converts any audio signal into a Dolby Digital bitstream for transport and playback through your home theatre or digital speaker system.

Transform your gameplay into an exciting and realistic experience using Dolby Digital Live. Audio cues and effects that follow the onscreen action are reproduced, immersing you in 5.1 channel surround sound that puts you at the center of the action.

To learn more about Dolby Digital Live, visit www.dolby.com.

DTS Connect

DTS Connect is a real-time encoding technology from DTS, Inc. for interactive media and is only available on the PC platform. It converts any audio signal on the computer into 5.1 channel DTS format and transports it via a single digital cable.

With Dolby Digital Live or DTS Connect, a single digital cable is all that is needed to connect your computer to your home theatre system, simplifying the setup and eliminating the confusion of multiple cables.

To learn how to connect your A/V receiver or digital speaker system to your audio cards, consult the following sections:

- Connecting Home Theater Systems
- Connecting Digital Speaker Systems

Watching DVDs

Your DVDs are encoded with Dolby Digital audio technologies, which have to be decoded to enjoy multi-channel audio on your 5.1 speaker systems.

Decoding with a software DVD player

You can use a software DVD player to decode Dolby Digital or DTS encoded signals from your DVDs, and output multi-channel audio through your audio cards to your speakers.

To do so, you need to install a software DVD player such as PowerDVD or WinDVD (latest version recommended).

Decoding with an external decoder

You can pass Dolby Digital or DTS encoded signals from your DVDs through your audio cards to an external decoder (for example, an A/V receiver), and output multi-channel audio to your 5.1 speaker systems. Some digital speaker systems are also capable of decoding Dolby Digital or DTS encoded signals.

To learn more, consult the documentation of your external decoder or digital speaker system.

To learn how to connect your A/V receiver or digital speaker system to your audio cards, consult the following sections:

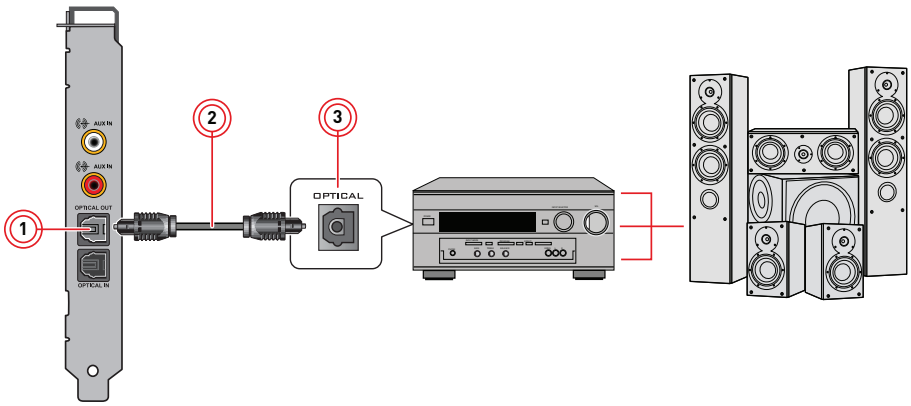
- Connecting Home Theater Systems
- Connecting Digital Speaker Systems

Playing / Recording Music

Add studio quality audio sound tracks or voice tracks to your video clips or home videos with studio-grade components which include 123dB analog-to-digital converters (ADCs) with RCA Aux-in and optical input for outstanding recording quality.

Connecting your external device to the Sound Blaster ZxR

You can play music from, and/or record music to external devices (for example, Digital Audio Tape player/recorder) by connecting them to your Sound Blaster ZxR.



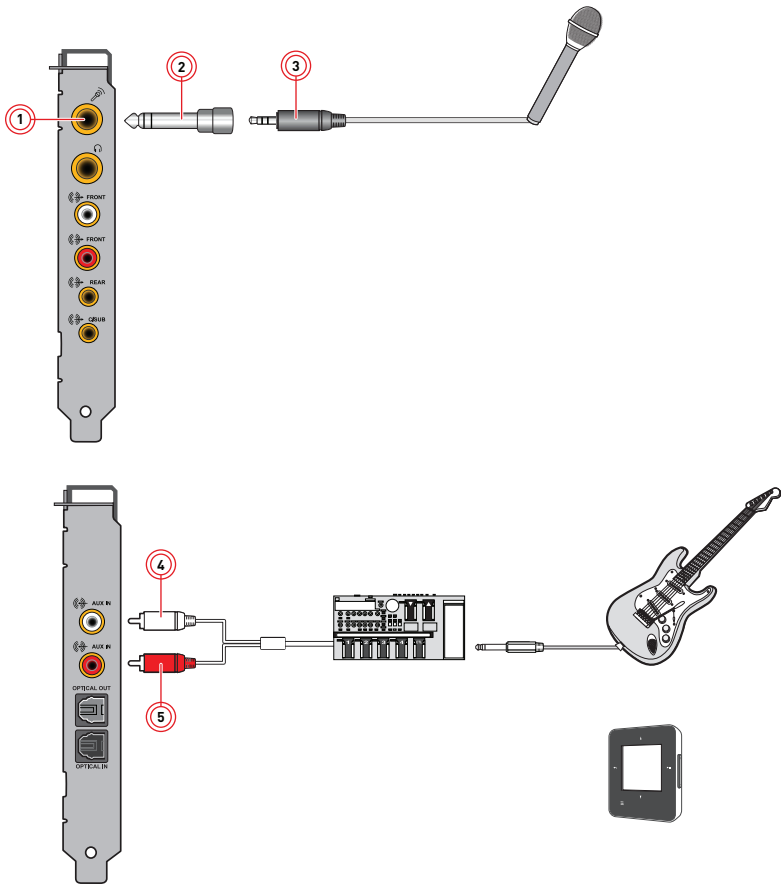
	Jack, Connector or Cable	Description
1.	Optical S/PDIF Out jack	Connects to recording devices with optical connectors (for example, DAT recorders, MD recorders or external hard disk recorders).
2.	Optical cable	Connects the playback or recording device to your Sound Blaster ZxR.
3.	Optical S/PDIF Out jack	Connects to the Optical S/PDIF Out jack on your audio card.

Creating Music

You can set up a home music studio using your Sound Blaster ZxR.

Put together your own productions consisting of multiple music tracks from a MIDI synthesizer or an electric guitar. Alternatively, connect your electric guitar using a pre-amp box to the RCA Aux-In jacks. Use a converter if your pre-amp box comes with a larger (for example, a 6.35mm (1/4-inch)) connector.

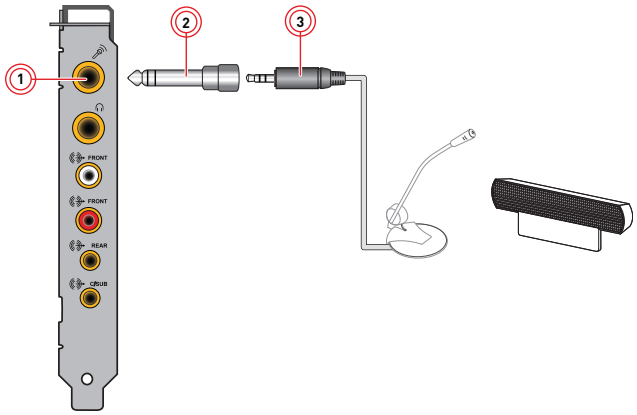
You can also connect a microphone to your Sound Blaster ZxR.



	Jack, Connector or Cable	Description
1.	6.3mm Microphone In jack	Connects to microphones with a 3.5mm (1/8-inch) plug via an adapter.
2.	6.3mm to 3.5mm Adapter	Converts 6.3mm (1/4-inch) stereo jack to 3.5mm (1/8-inch) stereo jack.
3.	3.5mm Microphone Plug	Connects to the 6.3mm Microphone In jack on your audio card via an adapter.
4.	RCA Aux-In 1 jack (L)	Connects to the Left output line-level sources (for example, MP3 players) with an RCA plug.
5.	RCA Aux-In 2 jack (R)	Connects to the Right output line-level sources (for example, MP3 players) with an RCA plug.

Online Chatting

Your Sound Blaster ZxR can also be connected to hands-free microphones or the Sound Blaster Beamforming Microphone, making over-the-Net chatting a hassle-free affair. Now you can enjoy clear voice chat for gaming and other online chatting purposes.



	Jack, Connector or Cable	Description
1.	6.3mm Microphone In jack	Connects to microphones or the Sound Blaster Beamforming Microphone with a 3.5mm (1/8-inch) plug.
2.	6.3mm to 3.5mm Adapter	Converts 6.3mm (1/4-inch) stereo jack to 3.5mm (1/8-inch) stereo jack.
3.	3.5mm Microphone Plug	Connects to the 6.3mm Microphone In jack on your audio card via an adapter.

Using the Creative Software Suite

The following software is designed for you to access the basic as well as the advanced features of your audio cards. We recommended that you familiarize yourself with their functions in order to make full use of the rich features of your audio cards.

To learn more about each application, consult its Online Help. Depending on the application, you can do this by clicking on the toolbar of the application, or selecting **Help Topics** from the **Help** menu.

Applications

- Sound Blaster Z-Series Control Panel
- Creative ALchemy
- Creative Software AutoUpdate
- Creative Host OpenAL / EAX5.0 HD
- Creative Product Registration
- Creative Diagnostics
- Dolby Digital Live encoder
- DTS Connect encoder
- Sound Blaster Speaker Setup

Bonus Applications on the Web supporting this product

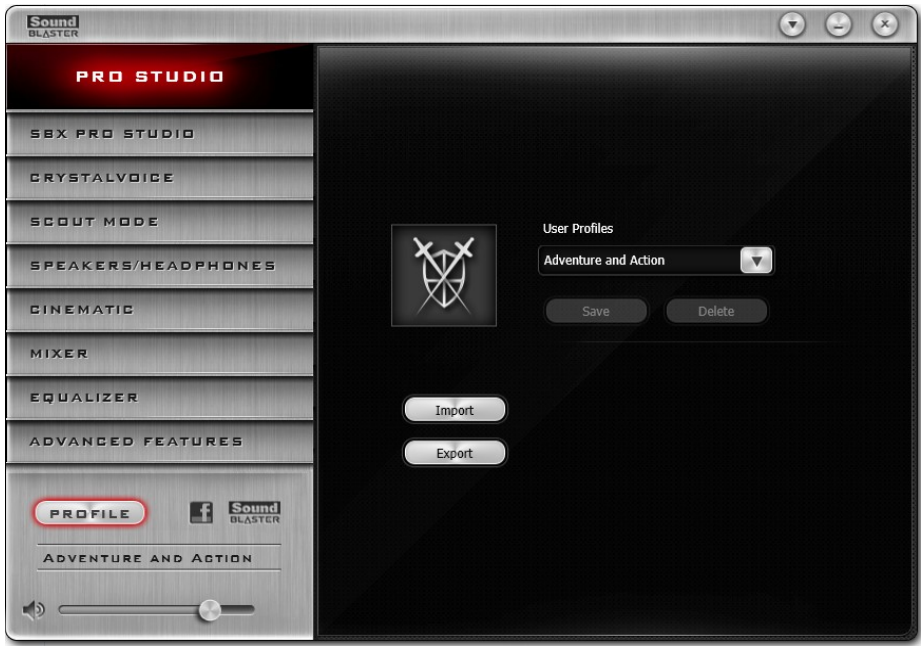
- Creative Music Server
- Creative WaveStudio
- Creative Smart Recorder
- Creative Media Toolbox (Trial)

Various other bonus Creative applications are also compatible for your audio cards. Visit www.creative.com/support and navigate to the relevant product page to view and download these applications.

Note

- The applications included with your audio cards may differ from those described here. Your audio cards may also come with third party applications.
- Some applications are available for certain operating systems or certain card models only.
- The color of Sound Blaster Z-Series Control Panel may differ for different sound cards.

Sound Blaster Z-Series Control Panel



Managing Your Profiles

Click the PROFILE button to display the Profiles pane.

Activate a profile by clicking the ▼ and selecting it from the list.

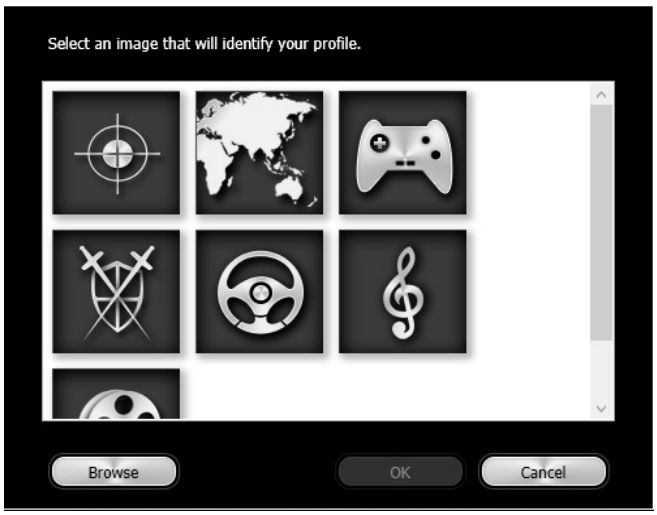
Click Save to save all settings to the current profile or create a new profile. Click Delete to delete the active profile.

Sharing Profiles

You can export your custom settings and share them with others, or import other gamers' custom settings.

Customizing Your Avatar

You can customize the avatar for each profile. Double-click the current avatar to open the selection window. You can either select an avatar from the list or click Browse to select your own image file to be used as the avatar.



Adjusting Your Master Volume Settings

Drag the master volume slider to adjust the volume level. You can mute/unmute the volume by clicking the speaker icon.

Configuring Your Software Settings

Click each feature to access its settings page. More information on each feature can be found in their respective sections in this manual.

Configuring Your General Settings

You can change the language settings or restore settings to their default values. You can also check for software updates. Click and configure various options from the list that displays including:

- **Options** - Enable the system to automatically check for software updates when your computer is online.
- Select whether the Sound Blaster Z-Series Control Panel is activated when Windows starts.
- Restore default settings.
- Select the audio playback device
- Select the supported software languages available for your system.
- Manually check for and update the software
- General information regarding your Sound Blaster Z-Series Control Panel software.

SBX Pro Studio Settings

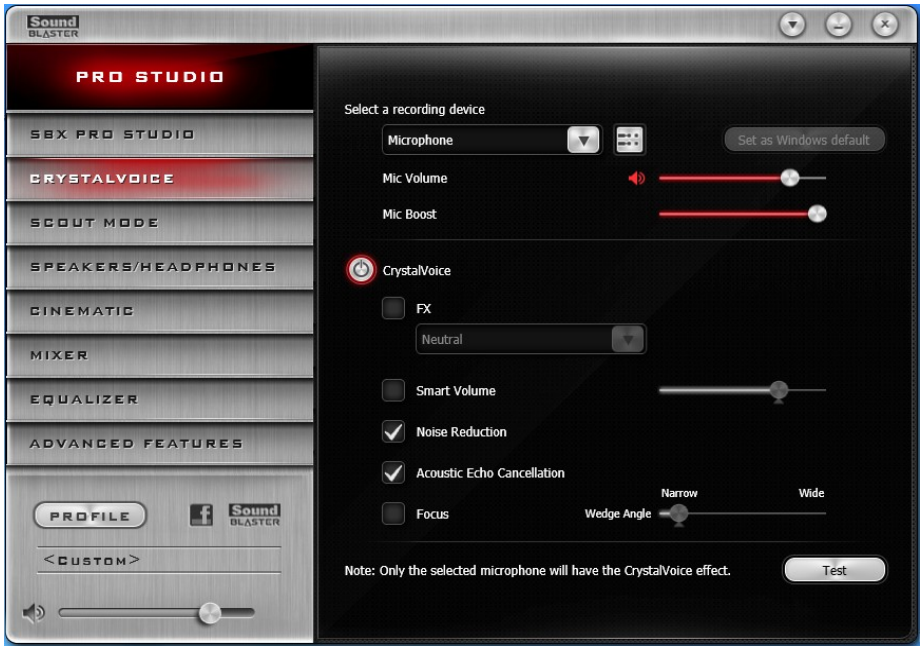
1. SBX Pro Studio enhancements
   Select to turn on or turn off each enhancement. You can hover your mouse cursor over each enhancement to display a brief explanation.
2. Enhancement Level sliders
   Adjust the amount of enhancement to apply.
3. Audio Test controls
   Play/Pause or Stop the demo video.

Enhancing Your Listening Experience

You can adjust the amount to apply for each enhancement by dragging its slider left to decrease or right to increase. To test the effects of the audio enhancements, click and listen to the demo video.

- **SBX Pro Studio Surround** provides immersion control of sounds not just around you, but also above and below for a full 3D audio experience. Hear the natural sense of audio depth, spaciousness and stunning 3D surround effects from your audio content. Enjoy an unbelievably true-to-life audio experience, whether it's over stereo speakers or headphones.
- **SBX Pro Studio Crystalizer** restores the dynamic range that is lost when iTunes and MP3 music gets compressed. This makes the music sound as good as the artist originally intended, and adds an enhanced level of realism for movies and games.
- **SBX Pro Studio Bass** fills in the low frequency tones and gives the extra impact for a better entertainment experience. It dramatically improves the sound experience without a subwoofer.
- **SBX Pro Studio Smart Volume** addresses the problem of abrupt volume level changes during playback and between songs by automatically and continously measuring volume, and intelligently applying gain and attenuation to compensate for those changes.
- **SBX Pro Studio Dialog Plus** enhances the voices in movies for clearer dialog, allowing the listener to hear the dialog over the rest of the soundtrack and over ambient noise in the listening environment.

CrystalVoice Settings



1. First select the recording device.
2. Next, turn on CrystalVoice and select to turn on or turn off each of the available enhancements.

Having Fun with CrystalVoice

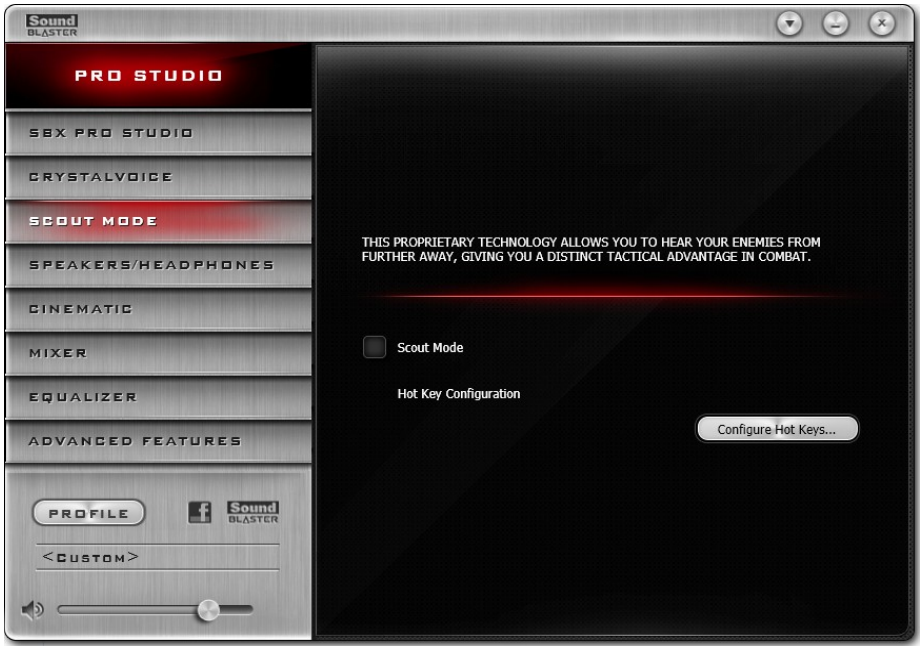
After configuration, click

and speak into your microphone to hear how your voice sounds with CrystalVoice applied. Readjust as desired.

- **CrystalVoice FX** enables the speaker's voice to be altered with a variety of effects, which can be used to enhance the tone of the speaker's voice, create interesting accents or to sound like a completely different person.
- **CrystalVoice Smart Volume** automatically adjusts the loudness of the speaker's voice to maintain a consistent volume level. This makes it convenient for the speaker to converse normally, regardless of whether the speaker is close to or far away from the microphone.
- **CrystalVoice Noise Reduction** enables the speaker to be heard clearly over background noise by constantly monitoring the environment and eliminate the unwanted noise that interferes with the conversation.
- **CrystalVoice Acoustic Echo Cancellation** eliminates echoes and enables the speaker to listen to the other party clearly. Echoes are a common problem present in voice communication systems that disrupts conversations by making it difficult to hear the other party.
- **CrystalVoice Focus** creates a zone and suppresses noise outside it to enable the speaker within to be heard with amazing clarity. Multiple microphones are used to focus, enhance the speaker's voice, and eliminate sounds outside the zone.

Scout Mode

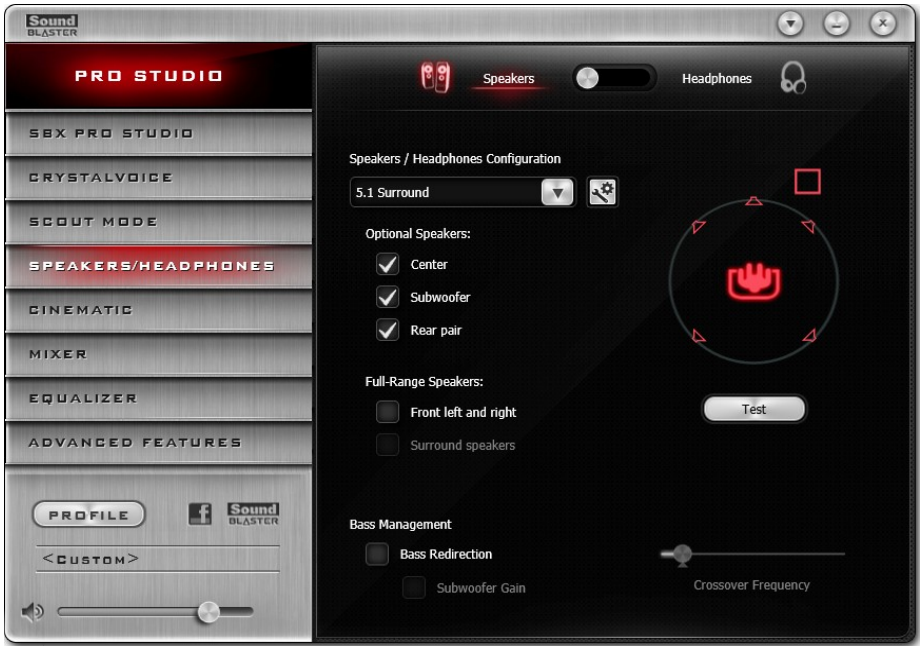
Scout mode transforms your hearing and enables you to hear your opponents from further away, giving you a distinct tactical advantage in combat.



1. Scout mode
   Select to turn on or off Scout mode.
   Click

   to configure hotkeys for turning on and turning off Scout mode.

Speakers/Headphones Settings

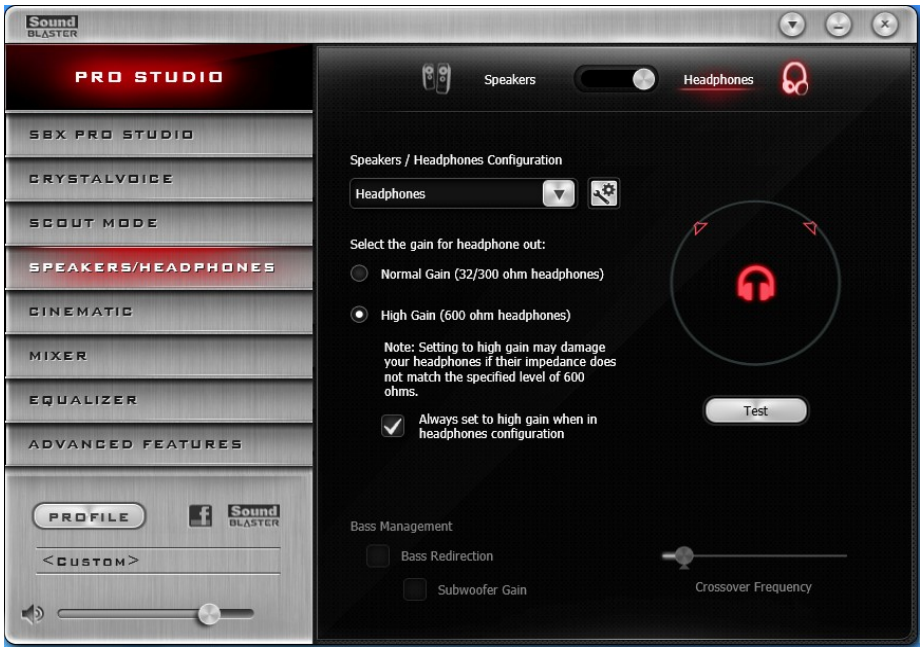


1. Switch between Speakers or Headphones mode.
2. Speakers / Headphones Configuration
   Select your current physical speakers or headphones configuration.
3. For headphones, select the gain for headphone out:
   - Normal Gain (32/300 ohm headphones)
   - High Gain (600 ohm headphones)

   Note:

   Setting to high gain may damage your headphones if their impedance does not match the specified level of 600 ohms.

4. Option to set to high gain by default.
   Select **Always set to high gain when in headphones configuration**. This check box is only applicable when **High Gain** is being selected as shown in the figure below.



Testing Your Audio Playback

Select the appropriate configuration based on your setup, then click

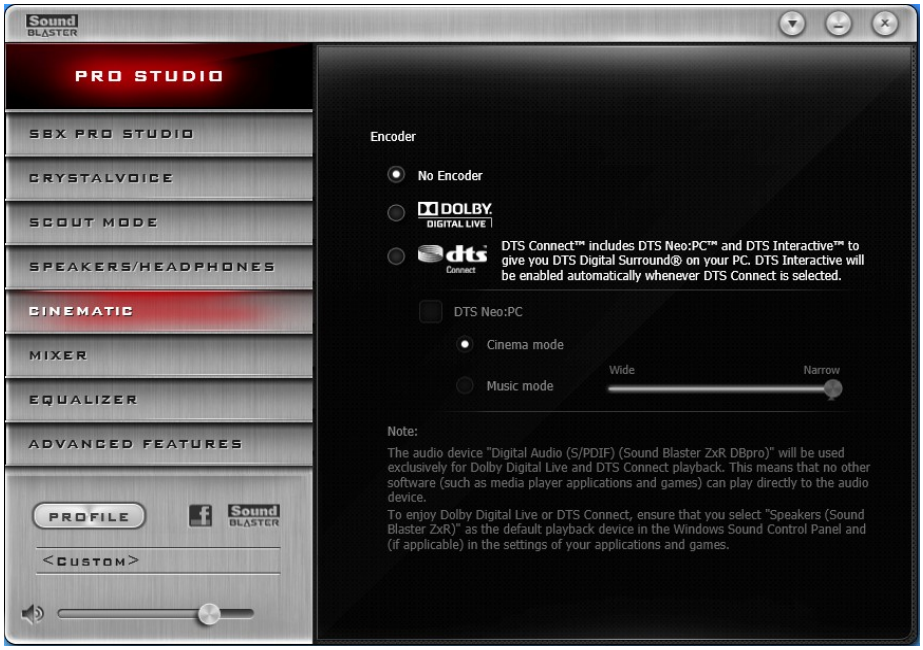
to hear a sample audio clip being played back through your setup.

Note:

Stereo Direct is an option for direct playback to stereo speaker channel sampled at 192kHz. The following features will not be applied to this playback:

- *SBX Pro Studio suite of audio enhancements*
- *DTS Connect*
- *Dolby Digital Live*
- *Equalizer*
- *Listen to this device*

Cinematic Settings


PRO STUDIO
SBX PRO STUDIO
CRYSTALVOICE
SCOUT MODE
SPEAKERS/HEADPHONES
CINEMATIC
MIXER
EQUALIZER
ADVANCED FEATURES
PROFILE
<CUSTOM>
Encoder
No Encoder
DOLBY DIGITAL LIVE
dts Connect
DTS Connect™ includes DTS Neo:PC™ and DTS Interactive™ to give you DTS Digital Surround® on your PC. DTS Interactive will be enabled automatically whenever DTS Connect is selected.
DTS Neo:PC
Cinema mode
Music mode
Wide
Narrow
Note:
The audio device "Digital Audio (S/PDIF) (Sound Blaster ZxR DBpro)" will be used exclusively for Dolby Digital Live and DTS Connect playback. This means that no other software (such as media player applications and games) can play directly to the audio device.
To enjoy Dolby Digital Live or DTS Connect, ensure that you select "Speakers (Sound Blaster ZxR)" as the default playback device in the Windows Sound Control Panel and (if applicable) in the settings of your applications and games.

1. Encoder settings
   Select **No Encoder** if you wish to turn off encoding or select **Dolby Digital Live** or **DTS Connect** to turn on the respective encoders.

Mixer Settings

1. Volume sliders
   Adjust the playback and recording volume for your various inputs and outputs.

Adjusting Your Mixer Settings

Slide the volume level sliders right to increase and left to decrease. Click the icon to mute/unmute the input/output. You can click the icon to adjust the settings for your input/output.

Equalizer Settings

1. EQ presets
   Select an equalizer preset to apply to your audio.
2. EQ sliders
   Adjust the equalizer settings.

Customizing Your EQ Settings

Select the EQ checkbox to enable this feature, then click the EQ drop-down arrow and select a preset from the list.

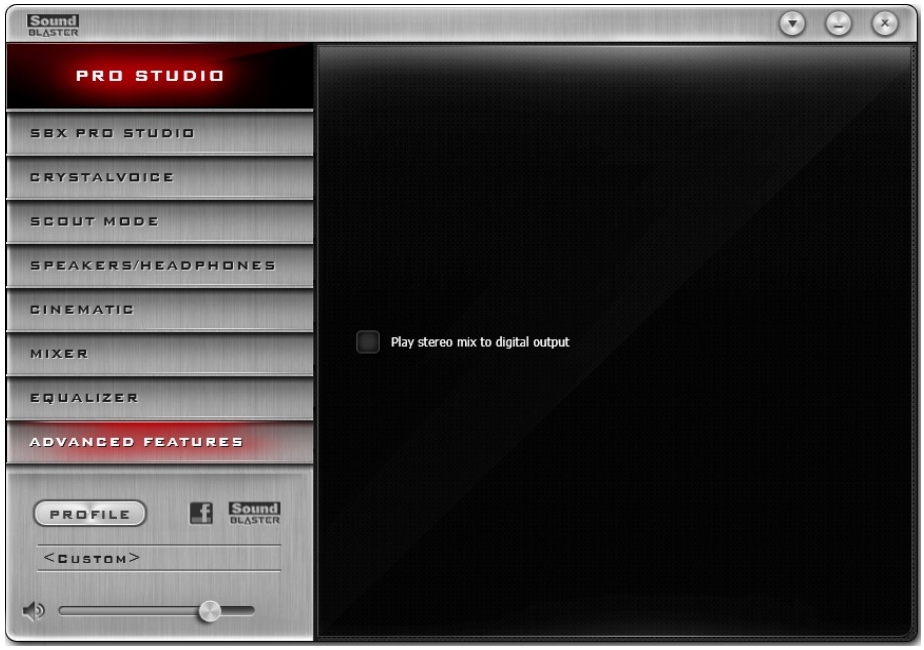
Selecting a preset will move the EQ sliders to the appropriate values. You can then adjust the equalizer setting by dragging the sliders up or down to the desired level. Click

to save the new configuration as a new preset.

Note

The list of default EQ presets cannot be deleted or overwritten.

Advanced Features Settings



1. Play stereo mix to digital output
   Select the checkbox to down mix the audio with its effects to a stereo PCM stream to be channeled to digital output.

Note

*You must first select **Speaker** as the playback device to use this feature.*

Using Your Audio Device

Playing Games

Your audio device is equipped with cutting edge audio technologies and software to enhance the audio in your games. SBX Pro Studio will elevate your gaming experience to the next level, allowing you to hear sound details in games you have never heard before!

For details on the various SBX Pro Studio enhancements and its configuration, please refer to SBX Pro Studio Settings.

Creative ALchemy

When configuring DirectSound®3D games on Windows 7 and Windows 8, the game loses its immersiveness and environmental effects due to changes in audio architecture.

To restore these effects and experience the full audio immersion, follow the steps below:

Enable Windows XP Compatibility Mode

1. Navigate to the folder where you have installed the game.
2. Right-click on the game's launcher and select **Properties**.
3. Select the **Compatibility** tab and select the **Compatibility Mode** checkbox.
4. Click the **Compatibility Mode** drop-down arrow and select **Windows XP (Service Pack 2)**, then click **OK**.

Enable the Game in Creative ALchemy

For Windows 7:

1. Click **Start** > **Programs or All Programs** > **Creative** > **ALchemy** > **Creative ALchemy**
2. The game should be detected automatically and appear in the left column.
3. Select the game and click to move it to the right column.
4. Close the application.

For Windows 8:

1. At Windows Start screen, click **Creative ALchemy**
2. The game should be detected automatically and appear in the left column.
3. Select the game and click to move it to the right column.
4. Close the application.

When you launch the game, you should hear the original effects.

Note

If the game is not detected, do the following:

1. Navigate to the folder where you have installed the game.

2. Right-click on the game's launcher and select Run as administrator.

3. Exit the application and launch Creative ALchemy again. The game should now appear in the left column.

Communicating with Voice over Internet Protocol (VoIP)

Use a headset with your audio device to enjoy outstanding acoustic performance in popular VoIP applications like Ventrilo® and TeamSpeak®. Hear and be heard clearly by teammates during multi-player games to get the tactical edge.

You can enhance such voice communications using CrystalVoice enhancements. For more details, please refer to CrystalVoice Settings.

Creating Your Audio 'Sweet Spot' with the Sound Blaster Speaker Setup

Generally, for a 5.1 speaker configuration, there is an ideal speaker placement that allows you to position yourself in the audio sweet spot, giving you the best surround and audio pleasure possible. Please refer to Positioning Your Speakers or your speaker system documentation for details on the recommended placement.

Often, however, we may be unable to place our speakers ideally due to physical constraints such as room size and object placements etc. Hence, the Sound Blaster ZxR audio cards come bundled with the Sound Blaster Speaker Setup application. Simply launch this application from the Sound Blaster Z-Series Control Panel (icon found in Speakers/Headphones settings), or your Windows start menu and adjust the settings to create a virtual speaker placement.

Speaker Configuration

Here you can configure your current speaker system and also conduct sound tests to check your setup.

Bass Management

Direct bass audio to your subwoofer using the various configuration options found in this tab. You can perform a base test to monitor for frequencies that drop as the tone sweeps from your front speakers to your subwoofer. Adjust as desired.

Sound Blaster Speaker Setup
Speaker Configuration
Bass Management
Polarity Selection
Speaker Position
Speaker Level
Enable Bass Redirection
Crossover Frequency: 80Hz
10Hz
1000Hz
Subwoofer Gain
Bass Test
Start Bass Test and listen for frequencies that may drop out or fall in volume as the tone sweeps from your front speakers to your subwoofer. Adjust the crossover frequency so that the transition is seamless.
Default
CREATIVE

Polarity Selection

If you have an audio/video (A/V) receiver, your speakers must be wired appropriately (in-phased) in order to reproduce sound fields correctly. The Polarity Selection tab helps you correctly connect all negative and positive output terminals on the A/V receiver to the inputs on the speakers.

Click the Start button and follow the on screen procedure to check your the speaker wiring.

Sound Blaster Speaker Setup
Speaker Configuration
Bass Management
Polarity Selection
Speaker Position
Speaker Level
To reproduce sound fields properly, your speakers must be wired appropriately (in-phased). Connect all negative (-) and positive (+) outputs to matching colour inputs.
Click the Start button to check the speaker wiring.
Start
Default
CREATIVE

Speaker Position

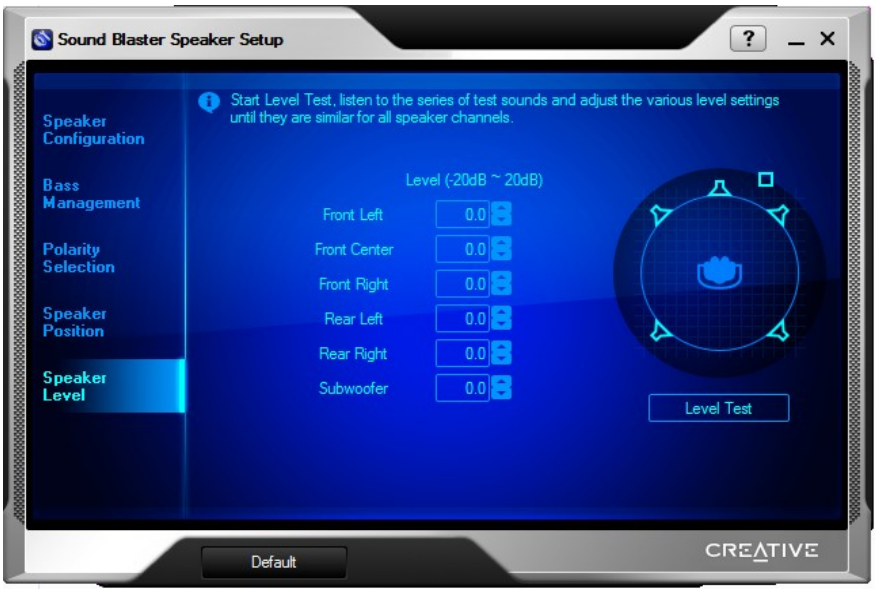
This tab helps you to maximize your speakers' audio performance when you are unable to optimize your speaker positioning due to physical space constraints. You will need to specify:

- the distance between the ideal listening position and each of your speakers
- the angle of your speakers
- position of the Front Center Channel (if available), to compensate for its actual position either above or below the monitor.

Speaker Level

This set of configurations enables you to achieve a balanced level for each speaker. Speaker level is affected mainly by the distance between the speaker and the listener.

Click the Level Test button and adjust the speaker level for each speaker accordingly.



General Specifications

This section details the specifications of your Sound Blaster ZxR audio cards.

PCI Bus Mastering

- PCI Express Specification Version 1.1 compliant
- Bus mastering reduces latency and speeds up system performance

Sound Blaster Sound Core3D Audio Processor

- Advanced hardware accelerated digital effects processing
- Dedicated DSP capable of both time and frequency domain audio processing

Professional Digital Audio Processing

- 24-bit Analog-to-Digital conversion of analog inputs at up to 96 kHz sample rate
- 24-bit Digital-to-Analog conversion of digital sources to analog outputs
- 16-bit to 24-bit recording sampling rates: 44.1, 48 and 96 kHz
- Supports Sony/Philips Digital Interface (S/PDIF) format of up to 24-bit/96 kHz quality
- S/PDIF output at selectable sampling rate of 44.1, 48 or 96 kHz from Microsoft Control Panel
- S/PDIF output not available during playback of protected digital audio content authored with DRM (Digital Rights Management) technology

Note

Depending on your system configuration, output sampling frequencies may be available at 48 and 96 kHz.

Flexible Mixer Control

- Selectable input source from various audio sources for recording
- Adjustable master volume control
- Independent volume control

SBX Pro Studio Technology

- SBX Pro Studio Crystalizer
- SBX Pro Studio Surround
- SBX Pro Studio Bass
- SBX Pro Studio Dialog Plus
- SBX Pro Studio Smart Volume

Sound Blaster CrystalVoice Technology

- CrystalVoice Acoustic Echo Cancellation
- CrystalVoice Noise Reduction
- CrystalVoice Smart Volume
- CrystalVoice FX
- CrystalVoice Focus

Troubleshooting

This section provides solutions to problems you may encounter during installation or normal use. This includes:

- Problems with Digital Audio Devices
- Problems with Dolby Digital Live or DTS Connect
- Problems with Multiple Audio Devices
- Problems with Sound

If you have any other technical problems with this product, you can also consult our self-help tool "Knowledge Base" for online troubleshooting and solutions. Visit www.soundblaster.com and select your region.

Problems with Digital Audio Devices

Popping noises are heard during playback.

The DMA feature may not be enabled for your computer's drives.

To solve this problem:

For Windows 7:

1. Click **Start > Control Panel > Hardware and Sound > Device Manager**.
   If the **User Account Control** dialog box appears, click the **Continue** button.
2. Double-click the **IDE ATA/ATAPI Controllers** icon.
3. For each ATA Channel in the list, right-click and select **Properties**.
4. Click the **Advanced Settings** tab and select the **Enable DMA** checkbox.
5. Click the **OK** button.

For Windows 8:

1. At the right toolbar, click **Settings > Control Panel > Hardware and Sound > Device Manager**. If the **User Acocunt Control** dialog box appears, click the **Continue** button.
2. Double-click the **IDE ATA/ATAPI Controllers** icon.
3. For each ATA Channel in the list, right-click and select **Properties**.
4. Click the **Advanced Settings** tab and select the **Enable DMA** checkbox.
5. Click the **OK** button.

Problems with Dolby Digital Live or DTS Connect

Cannot enable Dolby Digital Live or DTS Connect.

Before enabling Dolby Digital Live or DTS Connect:

- Stop all audio playback through your selected output device. If not, Dolby Digital Live may not be enabled.

Dolby Digital Live / DTS Connect is not working for my applications and games.

To solve this problem:

- Set the Speakers option of your audio device as the default playback device in the settings menu of your applications and games, and in the Windows Sound Control Panel.

Note

If Dolby Digital Live or DTS Connect is enabled, only PCM audio and certain compressed audio (for example, MP3) can be played, which will be encoded by Dolby Digital Live or DTS Connect through your selected output device.

Problems with Multiple Audio Devices

If there are other audio cards on the system.

You may have an existing audio device installed in your computer. The audio device may be an audio card or an onboard audio chipset. Before you install your audio device, you are advised to disable or completely uninstall and remove your existing audio device. Operating multiple audio devices in your computer may introduce usability issues.

Alternatively, during the installation of your audio cards, do the following:

- If your computer detects an installed Sound Blaster Audigy series, Sound Blaster Live! series or Sound Blaster PCI512 audio card, a message box recommending that you completely uninstall and remove the older audio device will appear. Click the **Yes** button and follow the instructions on the screen to complete the removal of the old audio device. Remove the old audio card from your computer.
- If your computer detects any other installed audio card, a message box recommending that you completely uninstall and remove the older audio device will appear. Click the **Yes** button to continue with the installation of the audio cards.
  After the installation of the audio cards, completely uninstall the existing card and remove the audio card from your computer.

If the system has an onboard audio chipset.

Disable your computer's onboard audio chipset. Consult the documentation of your computer's motherboard for details.

Problems with Sound

No sound from the headphones.

Check the following:

- The headphones are connected to the cards' Line Out 1 jack (Front L/R).
- In the Speakers/Headphones tab of the Sound Blaster Z-Series Control Panel, the **Headphones** option is selected.

No audio output when playing digital files such as .WAV, MIDI files or AVI clips.

Check the following:

- The speakers' volume control knob, if any, is set at mid-range. Adjust the volume in Mixer Settings of the Sound Blaster Z-Series Control Panel, if necessary.
- The powered speakers or external amplifier are connected to the cards' Line Out jacks.
- There is no hardware conflict between the cards and a peripheral device. See Problems with Sound.
- The Speakers/Headphones Configuration settings in the Speakers/Headphones tab of the Sound Blaster Z-Series Control Panel corresponds to your actual speaker or headphone configuration.

Safety Information

Refer to the following information to use your product safely, and to reduce the chance of electric shock, short-circuiting, damage, fire, hearing impairment or other hazards. **Improper handling may void the warranty for your product. For more information, read the warranty available with your product.**

- Do not dismantle or attempt to repair your product.
  Refer all servicing to authorized repair agents.
- Do not expose your product to temperatures outside the range of 0°C to 45°C (32°F to 113°F).
- Do not pierce, crush or set fire to your product.
- Keep your product away from strong magnetic objects.
- Do not subject your product to excessive force or impact.
- Do not expose your product to water or moisture.
  If your product is moisture-resistant, take care not to immerse your product in water or expose it to rain.

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